OPI: S&T/PPID
PART 1 OF 5

COMPLIANCE TESTING FOR NET WEIGHT LABELING OF MEAT AND POULTRY PRODUCTS

CHANGE TRANSMITTAL SHEET

I. PURPOSE

A. As of January 2, 1992, the Net Weight Labeling Of Meat and Poultry Products rule is effective, and changes will be implemented regarding net weight compliance testing. Per Sections 317.2(h)(2) and 381.121(c)(6) of the MPI regulations, meat and poultry establishments are responsible for assuring that the net weight statement "as it is shown on a label shall not be false or misleading and shall express an accurate statement of the quantity of contents of the container."

B. The attached directive transmits net weight compliance testing procedures that replace those currently used. MPI Manual Subpart 18-K will be cancelled upon publication of this directive. Listed below are some changes that will occur. Reference sites are given for differences in the MPI regulations (See paragraph II., A., below) and between the MPI Manual and the FSIS Field Manual for In-Plant Meat and Poultry Net Weight Compliance Testing (Attachment 3 of FSIS Directive 7240.1). (See paragraph II., B.-J., below).

II. CHANGES

A. Tare weight for poultry products includes the weight of the dry packaging materials and giblet wrapping materials. Formerly the weight of the wet or dry packaging materials and giblet wrapping materials was considered tare weight.

MPI Regulations: 381.121(b)

B. The Lower Limits, also called the Maximum Allowable Variations (MAV), are the same for the new procedures as they were for the old procedures for all products up to 10 pounds. The lower limit for products over 10 pounds changes to one percent of the labeled net weight.

MPI Manual: Page 173
FSIS Field Manual: Page 16

C. A net weight form is available for use in determining compliance with the Agency's net weight requirements. Completion of this form is optional for net weight tasks scheduled by the Performance Based Inspection System (PBIS) and mandatory when performed outside of PBIS.

MPI Manual: Page 172
FSIS Field Manual: Page 9

D. Under the new procedures there are two types of lots --a production lot and an inspection lot. A production lot is defined by the packer. An inspection lot is defined by the inspector.

MPI Manual: Page 171
FSIS Field Manual: Page 3

E. The number of sample units selected from a lot changes to either 10 or 30 units under the new procedures depending on the size of the lot. The new procedures do not have provisions for requiring additional sampling unlike the old procedures. The sample sizes in the new program are:

Lot Size	Sample Units
250 or less	10
251 or greater	30

MPI Manual: Page 173 and 174
FSIS Field Manual: Page 15

F. The minimum number of tare sample units selected changes from 15 to 2 under the new procedures. However, with glass containers and large tare differences, more tare sample units are required.

MPI Manual: Page 171 and 172
FSIS Field Manual: Page 15, 22, 23, and 24

G. Changes to the Pass/Fail Criteria are as follows:

1. Under the new procedures a lot fails when a sample unit is below the labeled net weight by more than one MAV. (The current program requires that two sample units be below the MAV to fail the lot.)

2. The new procedures still require that the average of the actual net weights meet or exceed the average of the declared net weights. However, the new procedures accomplish this by requiring that the total of all package differences equal or exceed zero.

MPI Manual: Page 171, 172, and 173
FSIS Field Manual: Page 4

H. The method used to read a mechanical scale when the indicator or pointer is between two divisions is changed under the new procedures. Under the old procedures the lower division was always recorded. Under the new procedures the division closest to the pointer is used. When the indicator is halfway between two division, the official should record the value corresponding to the next higher division when recording the gross package weight, but should record the value corresponding to the next lower division when recording the tare.

MPI Manual: Page 171

FSIS Field Manual: Page 7

I. A testing procedure is available for performing a drained weight check. This procedure is applicable for monitoring net weight compliance of products packed in a medium which is considered part of the tare weight, such as pickled pigs feet or corned beef packed in brine when these products are produced outside of a net weight quality control program.

MPI Manual: Page 168-174/Quality Control Program
FSIS Field Manual: Page 25

J. Scale requirements change under the new procedures. Scales must now meet the requirements of the National Institute of Standards and Technology's (NIST) Handbook 44.

MPI Manual: Page 171
FSIS Field Manual: Page 6

III. CANCELLATION

For recordkeeping purposes, this transmittal sheet should be retained with the directive.

W. S. Horne
Deputy Administrator
Inspection Operations

Attachment
FSIS Directive 7240.1

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FSIS DIRECTIVE 7240.1
12/20/91
OPI: S&T/PPID

COMPLIANCE TESTING FOR NET WEIGHT LABELING OF MEAT AND POULTRY PRODUCTS

I. PURPOSE

This directive transmits the manual titled "FSIS Field Manual for In-Plant Meat and Poultry Net Weight Compliance Testing" that was prepared in cooperation with the National Institute of Standards and Technology, (NIST), Department of Commerce. The field manual will be used by FSIS inspectors in compliance testing for net weight labeling of meat and poultry products. This directive also lists the responsibilities of the FSIS inspectors and the FSIS Regional Directors in regard to net weight compliance. Additionally, the procedures for establishing net weight compliance under a total quality control (TQC) program or a partial quality control (PQC) program are outlined.

II. CANCELLATION

MPI Manual Subpart 18-K.

III. RESERVED

IV. REFERENCES

Sections 317.2, 317.18, 317.19, 317.20, 317.21, 317.22, 317.23, 317.24, and 381.121, 381.121a, 381.121b, 381.121c, 381.121d, 381.121e of the MPI Regulations.
FSIS Directives 8820.1 and 8830.1.

V. POLICY

A. The Federal meat and poultry inspection regulations (1) establishes standards that ensures that the net weight statement is as accurate as possible; (2) enables Federal, State and local regulatory agencies to enforce strict net weight standards at retail and other locations within their jurisdictions where meat and poultry products are sold; (3) provides clear and uniform notice to packers, wholesalers and retailers of net weight compliance procedures and requirements; and (4) establishes net weight regulations that are generally uniform with those used for other food products.

B. FSIS is adopting the net weight compliance procedures and definitions in the National Institute of Standards and Technology (NIST) Handbook 133, "Checking the Net Contents of Packaged Goods," Third Edition and supplements, Washington, D.C., U.S. Government Printing Office, September 1988. Those standards and definitions are the basis of the FSIS Field Manual for In-Plant Meat and Poultry Net Weight Compliance Testing.

VI. RESPONSIBILITIES FOR NET WEIGHT COMPLIANCE TESTING

A. The FSIS inspector will:

1. Monitor the accuracy and suitability of scales in federally inspected establishments used to weigh meat and poultry products and implement corrective action.

2. Conduct net weight lot inspection tests by the procedures set forth in the FSIS Field Manual for In-Plant Meat and Poultry Net Weight Compliance Testing and net weight on-line tests under approved QC programs by procedures set forth in Section VII.

3. Assist State and local officials as directed by the region.

B. FSIS Regional Directors will:

1. Instruct FSIS employees in the procedures to cooperate with State or local officials who are reviewing the net weight records.

2. Assist State or local officials in identifying the establishment personnel to contact to review establishment maintained records on any lots in question.

3. Inform the State and local officials, upon request, if a federally inspected establishment is operating under an approved TQC or PQC program.

4. Provide assistance to establishments that seek to develop and adopt a FSIS approved TQC or PQC program.

VII. RESPONSIBILITIES REGARDING PQC AND TQC PROGRAMS

A. Definition

1. Average. The sum of a number of individual measurement values divided by the number of values.

2. Lower Limit for Individual Weights (LRL). The lower reject limit for individual measurements. The lowest value an individual measurement may have without causing the production lot to be rejected for failure to meet prescribed requirements for individual measurements.

3. Lower Limit for Subgroup Averages (LRLx). The lower reject limit for subgroup averages or medians. The lowest value the average or median of a subgroup may have without causing the production to be rejected for failure to meet prescribed requirements for subgroup averages.

4. Net weight. The weight of packaged product remaining after deductions for tare weight have been made.

5. Range (R). The difference between the largest and the smallest of a set of measured values.

6. R(5) or R(10). The maximum range for either 5 or 10 packages.

7. Run criteria. Action taken when consecutive low subgroup averages occur.

8. Subgroup. Either 5, 10 or other number of packages representing a subgroup.

9. Tare. The weight of a container, box, wrapper, or other packaging material that is not the product.

B. The establishment, in order to maintain PQC/TQC approvals for net weight, must:

1. Assure and document that scales are calibrated, maintained, and have received valid certification from state or local government weights and measures officials; or from a state registered or licensed repair person; or from a state registered or licensed repair plant employee; or have an FSIS quality control program which includes a detailed description of how scales, used to weigh meat and poultry products sold or otherwise distributed in commerce, will meet NIST Handbook 44 requirements for accuracy on a

minimum of a yearly basis.

2. Establish and document tare weight in the approved TQC or PQC program.

3. Assure and document that the net contents of packaged goods meets the net weight declared on the label. The Agency expects that all TQC/PQC net weight programs will incorporate the following methodology:

a. Sample a subgroup of packages.

b. Total the weight of each subgroup and determine the average and the range.

c. Use (Table 1 - Groups) to determine the group classification.

d. Use (Table 3 - Limits) to initiate the following actions:

(1) Check each package in the subgroup against the "Lower Limit for Individual Weights (LRL)." If an individual package fails the LRL, retain all product produced after the last acceptable subgroup and institute corrective and preventive actions as defined in the approved TQC/PQC program.

(2) Check each subgroup average against the "Lower Limit for Subgroup Averages (LRLx)." If a subgroup fails the LRLx, take the same action as outlined in (1) above.

(3) Check each subgroup against the limits for ranges of R(5) or R(10). Notify the production personnel whenever the range equals or exceeds the R(5) or R(10). They should search for assignable causes (such as malfunctioning filling machines) and make necessary adjustments.

(4) Check the net weight averages of all subgroups for a production shift against the stated label weight. Retain the entire production shift if the average is less than the stated label weight. (Exclude from this average all subgroups representing portions of production rejected during the shift for failure to meet the run criteria.)

e. Determine effective control of the TQC/PQC program by taking the following actions:

(1) Check that the series of consecutive subgroup averages meet the run criteria as identified in Table 2. If a series of subgroup averages equals or exceeds the limits of Table 2, retain all production back to the time of the last acceptable subgroup weighed before the

run and institute corrective and preventive actions as defined in the approved TQC/PQC program.

(2) Use alternate procedures as approved by the Agency, (e.g., CUSUM).

C. The FSIS inspector will:

1. Evaluate plant records as scheduled through the Performance Based Inspection System (PBIS) to determine:

a. That scale calibration and tare records are on file, timely, accurate, complete, and indicate that the approved TQC or PQC program is implemented and monitored b the plant as approved, including corrective and preventive actions when necessary.

b. That the net weight (and drained weight, when appropriate) calculations, records, and charts are accurate, timely complete, and indicate that the approved TQC or PQC program for net weight/drained weight is implemented and monitored by the plant as approved, including corrective and preventive actions when necessary.

2. Verify the effectiveness of the approved TQC or PQC program as scheduled through PBIS by:

a. Checking that the scales have a valid State Certification Seal or other acceptable certification.

b. Checking the accuracy of scales.

c. Checking tare by randomly selecting the number of empty containers specified in the approved TQC or PQC program and weighing them.

d. Sampling at least one subgroup, performing a net weight/drained weight inspection and determining compliance using the subgroup limits found in Table 3 (Attachment 2) or those included in the approve TQC or PQC program.

3. Document deviations on FSIS Form 8820-2, Process Deficiency Record (PDR) or initiate corrective action procedures as identified in FSIS Directive 8820.1 for deficiencies.

/s/ Wilson Horne
Deputy Administrator
Inspection Operations

Attachments

1 – Table 1 Groups and Table 2 – Run Criteria
2 – Table 3 – Minimum and Maximum Limits for QC Inspection
3—Net Weight Field Manual (Designed as a stand-alone document i.e., coversheet, consecutive page numbering, and appendices.) See paper copy.

Attachment 1

Table 1. Groups

GROUP	Definitions	
	Homogenous fluid when filled (Ounces)	All other Products (Ounces)
A	Less than 3	Less than 3
1	3 to 16	
2	Over 16	3 to 7
3		Over 7 to 48
4		Over 48 to 160
5		Over 160

Table 2. Run criteria [1/]

Consecutive subgroup averages						
Number of consecutive subgroup averages plotted on control chart	7	11	14	17	20	23
This number of subgroup averages below stated label weight is excessive	7	10	12	14	16	18

[1/] Plant action should be taken when four consecutive low averages indicate an Ineffective control program; it would cause for approval withdrawal and return to lot inspection.

Attachment 2

Table 3. – Minimum and maximum limits[1] for QC inspection

Standard deviation			.08 oz.	.16 oz.	.33 oz.	.50 oz.
$\bar{x}$ - Marked or required net weight		Group A	Group 1	Group 2	Group 3	Group 4
Lower limit for Individual weights (LRL)	$\bar{x}$ Minus	10 % of $\bar{x}$	7.1 gm. . 25 oz. 8/32 oz. 4/16 oz. 2/10 oz. 2/8 oz. ¼ oz.	14.2 gm. .50 oz. 16/32 oz. 8/16 oz. 5/10 oz. 4/8 oz. 2/4 oz.	28.3 gm. 1 oz. 1 oz. 1 oz. 1 oz. 1 oz. 1 oz.	42.5 gm. 1.50 oz. 1 16/32oz. 1 8/16 oz. 1 5/10 oz. 1 4/8 oz. 1 2/4 oz.
Lower limit for subgroup averages of 10 weights (LRL-) X10	$\bar{x}$ Minus	3% of $\bar{x}$	2.2 gm. 0.08oz. 2/32 oz. 1/16 oz. ([2]) (2/) (2/)	4.5 gm. .16 oz. 5/32 oz. 2/16 oz. 1/10 oz. 1/8 oz. (2/)	9.1 gm. .32 oz. 10/32 oz. 5/16 oz. 3/10 oz. 2/8 oz. 1/ 4 oz.	13.6Gm. .48 oz. 15/32 oz. 7/16 oz. 4/10 oz. 3/8 oz. 1/ 4 oz.
Lower limit for subgroup averages of 5 weights (LRL-) X5	$\bar{x}$ Minus	4% of $\bar{x}$	3.5 gm. .12 oz. 4/32 oz. 2/16 oz. 1/10 oz. 1/8 oz. (2/)	7.0 gm. .25 oz. 8/32 oz. 4/16 oz. 2/10 oz. 2/8 oz. ¼ oz.	14.1gm. .50 oz. 16.32 oz. 8/16 oz. 5/10 oz. 4/8 oz. 2/4 oz.	21.2gm. .75 oz. 24/32 oz. 12/16 oz. 7/10 oz. 6/8 oz. 3/ 4 oz.

[1] Use limits recorded in terms of scale calibrations used. Ex: If scale is in 1/16ths, use limits in 1/16ths; if in gram limits. Do not convert.

[2] Minimum limit is the marked or required net weight when sensitivity of scales used does not permit calibrations as precise as those recorded above.

Limit for ranges of subgroups of 10 weights $^{(R)}10$		15% of $\bar{\times}$	10.8 gm. .38 oz. 12/32 oz. 6/16 oz. 3/10 oz. 3/8 oz. 1/ 4 oz.	21.5 gm .76 oz. 24/32 oz. 12/16 oz. 7/10 oz. 6/8 oz. 3/ 4 oz.	43.4 gm. 1.53 oz. 1 17/32 oz. 1 8/16 oz. 1 5/10 oz. 1/4/8 oz. 1 2/4 oz.	64.9 gm. 2.29 oz. 2 9/32 oz. 2 4/16 oz. 2 2/10 oz. 2 2/8 oz. 2 1/ 4 oz.
Limit for ranges of subgroups of 5 weights $^{(R)}5$		12% of $\bar{\times}$	9.1 gm. .32 oz. 10/32 oz. 5/16 oz. 3/10 oz. 2/8 oz. 1/ 4 oz.	18.4 gm. .65 oz. 20/32 oz. 10/16 oz. 6/10 oz. 5/8 oz. 2/4 oz.	36.8 oz. 1.30 oz. 1 9/32 oz. 1 4/16 oz. 1 3/10 oz. 1 2/8 oz. 1 1/ 4 oz.	55.0 gm. 1.94 oz. 1 30/32 oz. 1 15/16 oz. 1 9/10 oz. 1 7/8 oz. 1 3/ 4 oz.

NOTE: for group 5 products LRL is 1% of labeled weight
LRL_{10} is 0.04 lb.
LRL_5 is 0.06 lb.